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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,616	07/14/2000	Earl T. Crouch	3000-045	7150

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/616,616

Applicant(s)

CROUCH ET AL

Examiner

Jenna-Leigh Befumo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 1,10-23 and 45-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-9 and 24-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 and 10 - 23, drawn to a weft-inserted, warp knit fabric, classified in class 66, subclass 192.
 - II. Claims 2 – 9 and 24 – 44, drawn to a coated weft-inserted, warp knit fabric, classified in class 442, subclass 121.
 - III. Claims 45 - 47, drawn to a method of forming the coated print receptive fabric, classified in class 427, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as clothing or as a geo-textile material and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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3. Inventions III and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the fabric can be coated by laminating the print receptive coating onto the fabric, instead of dipping the fabric in the coating. Additionally, the method can be used to coat other woven or knit fabrics, the method is not limited to coating weft-inserted, warp knit fabrics.

4. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions. Invention I is drawn to a weft-inserted, warp knitted fabric which is not coated, while invention III is drawn to a method of forming a coated fabric.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Edward Rilee on April 11, 2002, a provisional election was made without traverse to prosecute the invention of Group II, claims 2 – 9 and 24 – 44. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 10 – 23, and 45 – 47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

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currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

8. Claim 44 is objected to because of the following informalities: it suggested that the Applicant use the term “denier” instead of the abbreviation “d” to clarify the units. Appropriate correction is required.

9. Claims 2 is examined as comprising all the limitations of claim 1.

10. Additionally, the fabric construction is examined as the number of warp ends per inch by the number of weft ends per inch.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

12. Claims 2 – 3, 5, 6, 9, 24, 25, 27, 28, 31, 37, 38, and 42 – 44 are rejected under 35

U.S.C. 102(b) as being anticipated by Porter et al. (5,399,419).

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Porter et al. discloses a weft-inserted, warp knit fabric which is impregnated with a thermoformable polymer (abstract). The composite produced is homogenous unitary film which is reinforced with the weft-inserted, warp fabric (column 3, lines 35 – 38). The weft-inserted, warp knit fabric can be made from synthetic materials such as polyester, polyamide, polyolefins, and other materials (column 4, lines 27 – 31). The fabric is an open fabric with four to twenty yarns per inch in either the machine or cross direction, preferably six to ~~n~~one in the machine direction, or the warp direction, and six to eighteen in the cross-machine, or the weft direction (column 4, lines 34 – 39). Therefore, the fabric can have a construction of 6x6 to 9x18. The polymeric coating can be polyvinyl chloride plastisol, polyurethane, polyethylene, acrylics, with polyvinyl chloride being preferred (column 5, lines 27 – 33). Porter et al. teaches that additives such as opacifiers and flame retardants can be added to the polymeric coating (column 6, lines 20 – 25). Finally, Porter et al. discloses that the fabric is made from yarns with a linear density of 1000 denier (column 8, lines 11 – 13). Therefore, claims 2, 3, 5, 6, 9, 24, 25, 27, 28, 31, 37, 38, and 42 – 44 are anticipated.

13. Claims 2, 24, 37, 38, and 42 – 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Wagner, Jr. et al. (5,950,457).

Wagner et al. discloses a weft-inserted, warp knit fabric for use in a vinyl coated laminate used in awnings, and signs (abstract). The fabric can be made of polyester yarns having a denier of 150 to 2000 in the warp direction and polyester yarns having a denier of 150 – 1500 in the weft direction (column 3, lines 31 – 40). The fabric can have 5 to 20 warp ends per inch and 10 to 20 weft ends per inch (column 6, lines 22 – 28). This would correspond to a fabric construction of 5x10 to 20x20. Therefore, claims 2, 24, 37, 38, and 42 – 44 are anticipated.

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Claim Rejections - 35 USC § 102/103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 32 – 36 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Porter et al. or Wagner, Jr. et al.

The features of Porter et al. and Wagner, Jr. et al. have been set forth above. Although Porter et al. and Wagner, Jr. et al. do not explicitly teach the limitations of the variations in the warp and weft directions, and that the fabric is substantially distortion free, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. polymeric coating, weft-inserted, warp knit fabric of polyester) and in the similar production steps (i.e. coating the fabric with the polymeric material) used to produce the laminated fabrics. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed limitations would obviously have been provided by the process disclosed by Porter et al. and Wagner, Jr. et al. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102. Thus, claims 32 – 36 are rejected.

Claim Rejections - 35 USC § 103

16. Claims 2, 3, 5, 6, 9, 24, 25, 27, 28, 31 - 38, and 42 – 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Crouch (5,895,705) in view of Porter et al..

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Crouch is drawn to a backlit sign fabric formed by applying a reinforcing scrim to a plastisol coating (abstract). The plastisol coating is made from polyvinyl chloride (column 2, lines 21 – 22). The coating can further contain additives such as thermal stabilizers, flame retardants, pigments, inorganic fillers and optical brighteners (column 3, lines 42 – 48). The fabric scrim applied to the coating is a weft-inserted, warp knit fabric made from polyester yarns with a denier between 150 to 2000 for the warp direction and a denier of between 150 and 1500 for the weft direction (column 3, lines 48 – 56). Crouch fails to teach the construction of the weft-inserted, warp knit fabric.

The features of Porter et al. have been set forth above. Porter et al. is drawn to PVC laminates comprising weft-inserted, warp knit fabrics. Porter et al. discloses that the weft-inserted, warp knit fabrics preferably have a construction of between 6x6 to 9x18. Therefore, it would have been obvious for one having ordinary skill in the art to choose a fabric construction of 6x6 to 9x18 as taught by Porter et al. for the fabric construction of the weft-inserted, warp knit fabric disclosed by Crouch, since the coated fabric taught by Crouch will need to have the same combination of open structure and reinforcing strength, to form a laminate with the PVC coating, while providing strength and stability to the film layer. Therefore, claims 2, 3, 5, 6, 9, 24, 25, 27, 28, 31, 37, 38, and 42 – 44 are rejected.

Although the limitations of the variations in the warp and weft directions, and that the fabric is substantially distortion free are not explicitly taught by Crouch et al. or Porter et al., it is reasonable to presume that said limitations would be met by the combination of the two references. Support for said presumption is found in the use of similar materials (i.e. polymeric coating, weft-inserted, warp knit fabric of polyester) and in the similar production steps (i.e.

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coating the fabric with the polymeric material) used to produce the laminated fabric. The burden is upon the Applicant to prove otherwise. Thus, claims 32 – 36 are rejected.

17. Claims 39 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al. or Wagner, Jr. et al.

Claims 39 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crouch in view of Porter et al.

The features of Porter et al., Wagner, Jr. et al., and Crouch et al. have been set forth above. Porter et al., Wagner, Jr. et al., and Crouch et al. fail to teach the width of the weft-inserted warp knit fabrics. It would have been obvious to one of ordinary skill in the art to produce fabrics with the recited widths since the wider fabrics can be made more economically than multiple thinner fabrics and the fabric produce would have better strength and stability properties than smaller fabrics sewn together when wider fabrics are needed in the end product. Finally, a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Thus, claims 39 – 41 are rejected.

18. Claims 4 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al. or Wagner, Jr. et al. in view of Chapman et al. (4,946,739).

The features of Porter et al. and Wagner, Jr. et al. have been set forth above. Both Porter et al. (column 1, line 16) and Wagner, Jr. et al. (abstract) disclose the coated fabrics can be used in signs. However, Porter et al. and Wagner, Jr. et al. fail to teach using a vinyl and acrylate blend coating. Chapman et al. is drawn to a paint receptive banner. Chapman et al. discloses adding a vinyl acrylic copolymer coating to a PVC coated fabric because the vinyl acrylate coating promotes increased adhesion and decreased drying time when paints are applied to the sign

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fabric (abstract). Therefore, it would have been obvious for one having ordinary skill in the art to add a vinyl acrylate copolymer coating layer to the coated fabrics taught by Porter et al. and Wagner, Jr. et al. to improve the adhesion of paints applied to the fabric and decrease the drying time as well. Thus, claims 4 and 26 are rejected.

19. Claims 7, 8, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter et al. or Wagner, Jr. et al. in view of Oakland et al. (6,287,743).

The features of Porter et al. and Wagner, Jr. et al. have been set forth above. Porter et al. and Wagner, Jr. et al. fail to teach using about 20% by weight of the coating titanium dioxide as the opacifier or pigment in the coating layer. Oakland et al. is drawn to an image material with comprises a print receptive coating. The coating comprises a polymeric resin and a white pigment (column 17, lines 61 – 62) The preferred white pigment is titanium dioxide due to the excellent optical properties at a reasonable cost (column 18, lines 1 – 7). The pigment is added in the range of 10 – 50% by weight of the coating material. Therefore, it would have been obvious for one having ordinary skill in the art to use 10 – 50% titanium dioxide as taught by Oakland et al. in the image receiving coating taught by Porter et al. and Wagner et al. since both Porter et al. and Wagner, Jr. et al. disclose that fillers and additives can be used in the coating and Oakland et al. discloses the titanium dioxide will provide superior optical properties due to the excellent optical properties of titanium dioxide.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sanders (4,388,364), Rogers (4,443,516), and Callaway et al. (2001/0051483 A1) are all drawn to coated weft-inserted, warp knit fabrics.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo
May 28, 2002



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